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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,400	11/21/2000	Yutaka Takeuchi	199861US2S	8258

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EXAMINER

GEMMELL, ELIZABETH M

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/716,400

Applicant(s)

TAKEUCHI ET AL.

Examiner

Beth Gemmell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the examiner has not met the burden of proof. This is not found persuasive because, although inadvertently omitted from paper number 4, the mask can be made by either crimping or fusing rather than welding.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Groups II and III, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "23" and "28" have both been used to designate a pressing side electrode. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "25" and "38" have both been used to designate black

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electrode. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "40" has been used to designate nugget, pipe and passage. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the convex portions must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

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requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claims 1,2, and 3 are objected to because of the following informalities:

- The use of the term and/or; it is unclear to the examiner exactly which combination is desired, all concave portions, all convex portions or both concave and convex portions, as well as the combinations between the inner and outer surface of the skirt portion.
- The use of the term electrode; it is unclear to the examiner whether the electrode is the back electrode or the pressing electrode.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto (US Patent 4,949,009).

Re claim 1: Iwamoto discloses, in figure 1, 11a and throughout the disclosure, a shadow mask (21) for use in a cathode ray tube comprising: a mask body having a

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mask effective section where a number of electron beam passage apertures are formed (25) and a skirt portion provided at a peripheral edge of the mask effective section (23); a mask frame (22) arranged outside the skirt portion wherein the skirt portion includes an outer surface in contact with the mask frame (column 6, lines 65+), an inner surface positioned opposite to the outer surface, and a plurality of concave and convex portions formed on the region of the inner surface of the skirt portion (26).

The examiner notes that the claim limitation that "the mask frame is resistance-welded to the skirt portion at a plurality of portions" is drawn to a process of manufacturing, which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing on unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Iwamoto fails to disclose the size of the concave and convex portions.

One of ordinary skill in the art would recognize, since the applicant fails to disclose the size of the electrode, that the size of the portions are relative to the size of an electrode. Therefore one of ordinary skill in the art at the time the invention was made would have been motivated to combine the mask disclosed by Iwamoto with that of concave and convex portions in order to get a better connection between the mask and the frame, thereby improving the life of the cathode ray tube.

Re claim 2: Iwamoto discloses the skirt portion including a plurality of concave portions formed in the outer surface.

Iwamoto fails to disclose the size of the concave and convex portions.

One of ordinary skill in the art would recognize, since the applicant fails to disclose the size of the electrode, that the size of the portions are relative to the size of an electrode. Therefore one of ordinary skill in the art at the time the invention was made would have been motivated to combine the mask disclosed by Iwamoto with that of concave and convex portions in order to get a better connection between the mask and the frame, thereby improving the life of the cathode ray tube.

Re claim 3: Iwamoto discloses all the limitations as evidenced above.

However, Iwamoto fails to disclose the size of the concave and convex portions.

One of ordinary skill in the art would recognize, since the applicant fails to disclose the size of the electrode, that the size of the portions are relative to the size of an electrode. Therefore one of ordinary skill in the art at the time the invention was made would have been motivated to combine the mask disclosed by Iwamoto with that of concave and convex portions in order to get a better connection between the mask and the frame, thereby improving the life of the cathode ray tube.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto in view of Higashinakagawa et al. (US Patent 4,827,178).

Iwamoto discloses all the limitations as evidenced above.

However, Iwamoto fails to disclose an oxide film, which covers the entire surface of the mask body and frame.

Higashinakagawa et al. discloses an oxide film, which covers the entire surface of the mask body and frame (column 1, lines 33+).

One of ordinary skill in the art at the time the invention was made would have been motivated to combine the mask with that of an oxide film because the film reduces reflection and prevents rusting, whereby improving the image and increasing the life of the CRT.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent 4,327,307
- US Patent 5,910,702
- US Patent 6,274,974

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DAVID V. BRUCE
PRIMARY EXAMINER

emg
April 29, 2003